

a<sup>3</sup>

8. (Amended) An electroactively controlled membrane structure, comprising:  
a membrane whose position is to be controlled;  
a supporting base;  
at least one electroactive bending actuator affixed to the supporting base; and  
connection means corresponding to each of the at least one electroactive bending  
actuators for operatively connecting the membrane to each of the at least one electroactive  
bending actuators;

wherein displacement of the at least one electroactive bending actuator effects  
displacement of the membrane; and

further wherein each connection means comprises a guiding wheel assembly and a track,  
wherein displacement of the actuator effects translation of the wheel assembly along the track,  
thereby imparting movement to the membrane.

9. (Amended) An electroactively controlled membrane structure, comprising:  
a membrane whose position is to be controlled;  
a supporting base;  
at least one electroactive bending actuator affixed to the supporting base; and  
connection means corresponding to each of the at least one electroactive bending  
actuators for operatively connecting the membrane to each of the at least one electroactive  
bending actuators;

wherein displacement of the at least one electroactive bending actuator effects  
displacement of the membrane; and

further wherein each connection means comprises:  
a guiding track affixed to the membrane;  
a guiding wheel assembly, the guiding wheel assembly further comprising an axle,  
affixed to the electroactive bending actuator, and four guiding wheels which maintain movement  
of the axle along the guiding track;

whereby bending of the actuator effects displacement of the membrane.